

Nova LTTM16 driver for decarbonization

M. Baldini

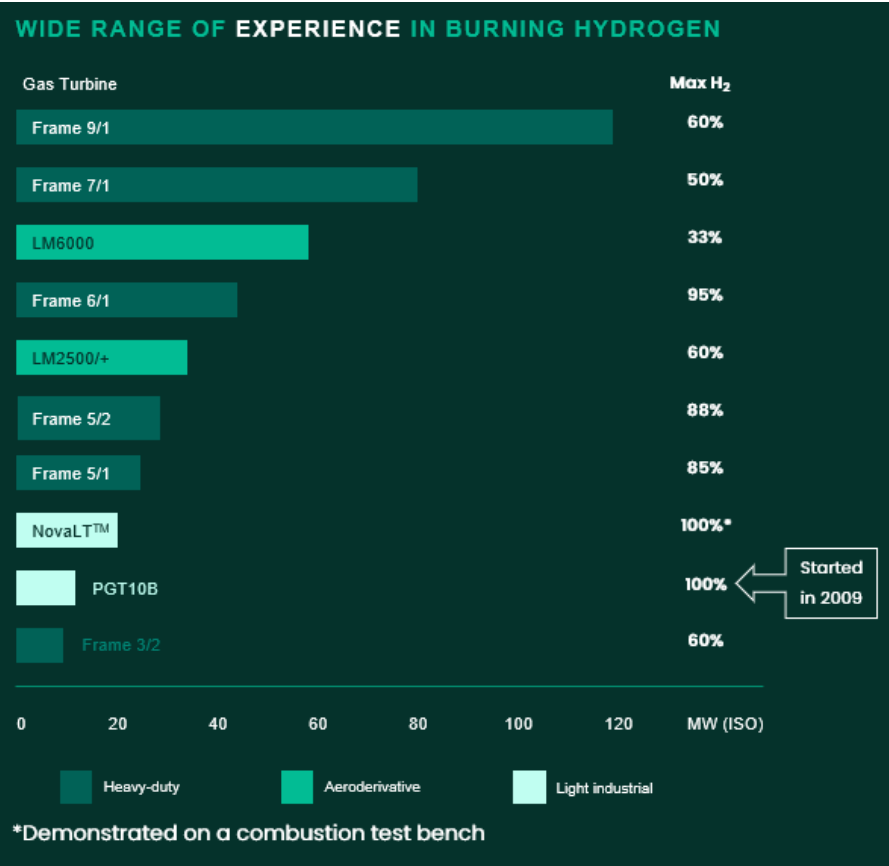
6th February 2024

Advancing the Hydrogen Revolution

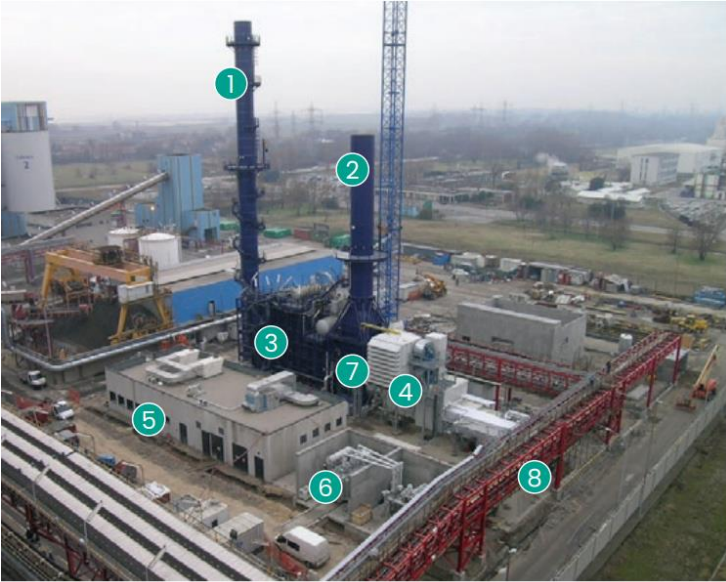
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|--|--|--|
| 100+ Years of experience with H ₂ | 70+ Installed GTs burning H ₂ up to 100% | 2009 First 100% H ₂ fueled gas turbine in commercial project |
|--|--|--|



2023
NovaLT™16



Hydrogen power plant in Fusina (Italy)



- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Dry flue gas stack 2. Bypass stack 3. Heat recovery steam generator (HRSG) 4. PGT10 gas turbine | <ol style="list-style-type: none"> 5. Control room 6. Transformer 7. Diverter 8. Piping rack |
|---|--|



State-of-the art gas turbine
 100% H₂ Ready GT Package



NovaLT™16 Gas Turbine burning 100% Hydrogen

POWERGEN SIMPLE CYCLE

16.9 MWe 36.4% Elect. efficiency

MECH DRIVE SIMPLE CYCLE

17.5 MW 37.5% Efficiency

COMBINED CYCLE

22.0 MWe
48% Elect. efficiency

COGENERATION (CHP)

31tph Steam output
80% CHP Efficiency

MAINTENANCE

35k – 70k (FFH)

No annual inspection,
fast engine exchange,
minimized inventory

NO_x EMISSIONS

15 ppm with SCR at exhaust (today)
15 ppm DLN (from 2026)

Zero CO₂ emissions

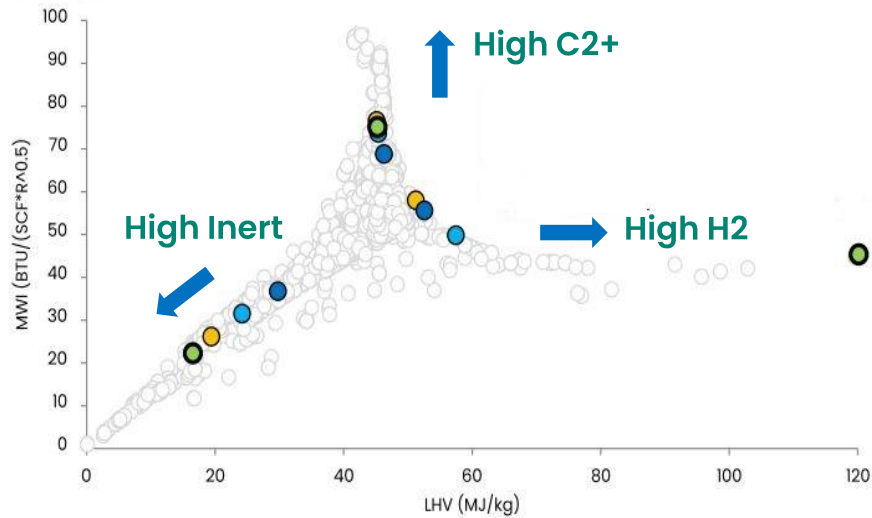
GT Package ready for 100%H₂



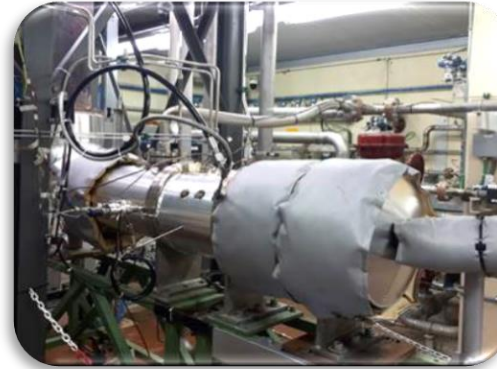
Start up with blends up to 100% H₂. Switch from NG to gas blends up to 100% H₂ on the fly

Design and testing for fuel flexibility

Baker Hughes has a **wide experience** of fuel flexibility on Aeroderivative and Heavy Duty Gas Turbines.



NovalT™ 16 is ready to burn **100% Hydrogen**, Biomethane and Diesel
BH is working on ammonia, biogas and methanol.
Possibility to design and test combustors for customized fuel compositions.



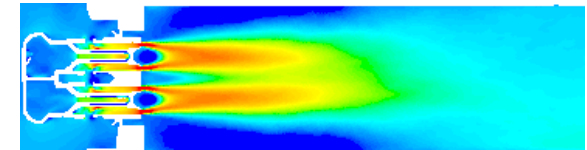
Baker Hughes Florence Campus



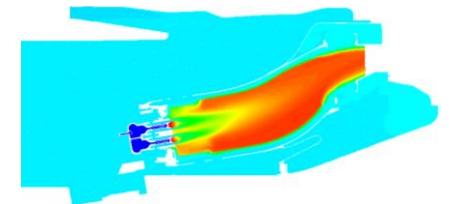
SestaLab (Tuscany)

Technology selection
Quick iterations

Component level: **burner**

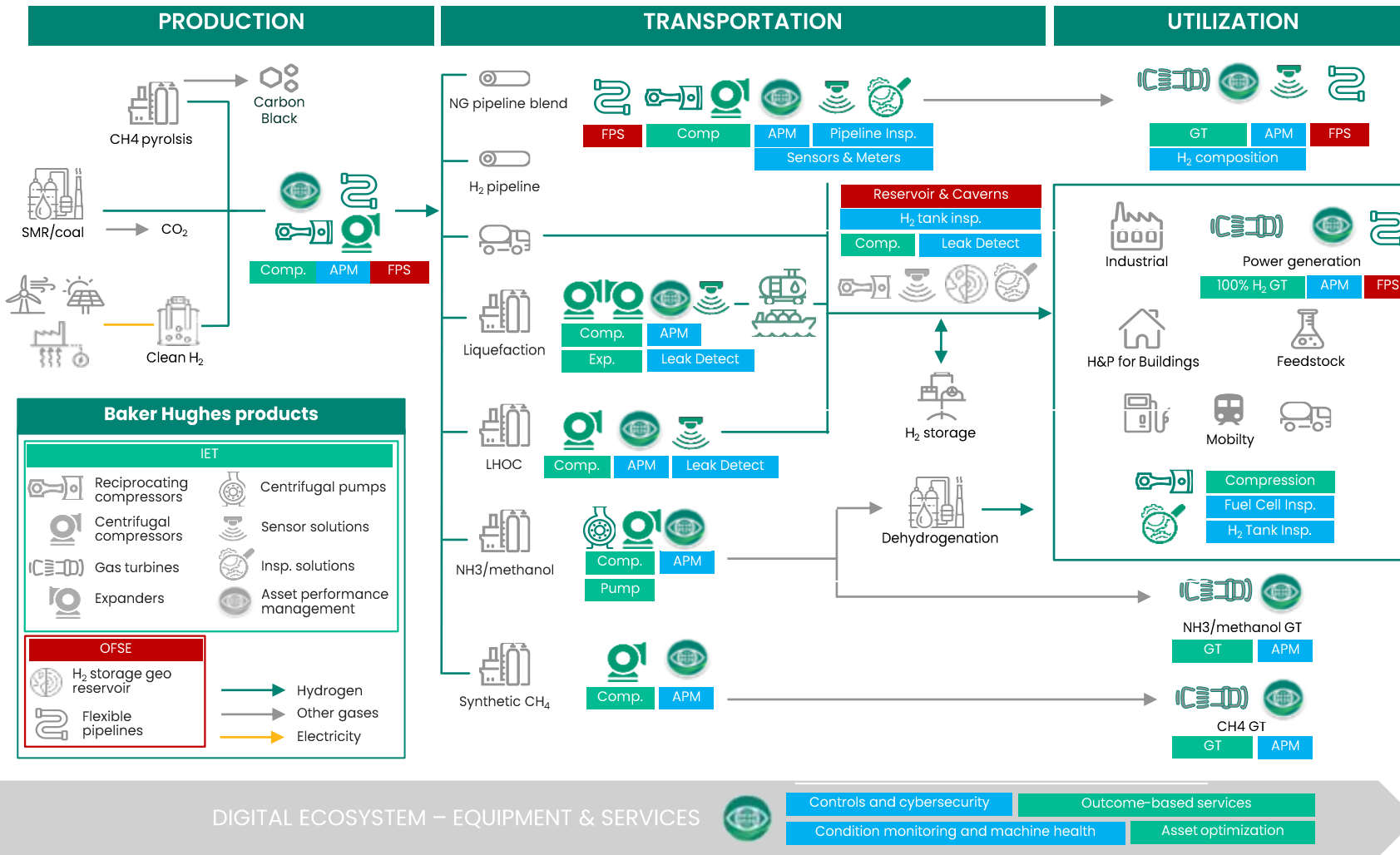


Full scale, full range
Subsystem verification
Sub-system level: **combustor**



Baker Hughes is working in all three main directions for fuel flexibility development

Our Portfolio across the H₂ Value Chain



100% hydrogen NovaLT™16 is ready today

100% H₂ DLN comb systems under development

~100+ years of experience working with H₂ on Reciprocating Compressors

50+ projects awarded in 18 months (2022-1H2023) playing with BH products

Working on ~500 projects with 4-year horizon supporting Partners and Customers

Baker Hughes 